**QUIZ #2 – Mutations**

True/False. (1pt. each)

\_\_\_\_\_ 1. All genetic diseases are dominant.  
\_\_\_\_\_ 2. Phenotypes are always affected when there is a genetic mutation.  
\_\_\_\_\_ 3. The human karyotype has 22 pairs of autosomal chromosomes and 1 pair of sex chromosomes.  
\_\_\_\_\_ 4. Humans are 2n or diploid individuals.  
\_\_\_\_\_ 5. Genetic testing is a widely accepted mode of eliminating risk of genetic mutations and variance.  
\_\_\_\_\_ 6. Every human has genetic mutations within their bodies.  
\_\_\_\_\_ 7. Mutations are always have a harmful and negative impact on a organism.  
\_\_\_\_\_ 8. Mutations are passed to offspring through body cells.

Multiple Choice. (2pts. each)

9. Two healthy people have a child expressing a genetic condition caused by a dominant allele. What can you conclude about the situation?

A. Infidelity – one parents had to contribute the disease allele.  
 B. The parents are not free from the disorder – one must be affected  
 C. The mutation was spontaneous.  
 D. The child is not the parent’s biological child.

10. The following correctly defines a missense mutation.

A. A mutations that codes for the same amino acid.  
 B. A mutation that codes for a stop codon, ending the protein.  
 C. A mutation that codes for a different amino acid.  
 D. A mutation that doesn’t make biological sense.

11. The following is the correct complementary strand for this DNA sequence – AATGCATCAG.

A. CTGATGCATT  
 B. TTACGTAGTC  
 C. AATGCATCAG  
 D. UUACGUAGUC

12. When does gene mutation have the greatest affect on an organism?

A. When the mutation occurs later in life due to an injury or accident that broke the genes.  
B. When the mutation causes cancer in young organisms.  
C. When the mutation occurs during embryonic development or in the gametes.  
D. When the sperm fertilizes the egg with a mutation, causing improper development.

13. Describe one genetic disease we discussed in class. Include what the symptoms are, how it is caused, who it effects, what possible treatment there is, etc. (4pts.)